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**Suzuki et al.**

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(54) **METHOD OF TEMPERATURE-CALIBRATING HEAT TREATING APPARATUS**

(75) **Inventors:** Fujio Suzuki, Tsukui-gun; Koichi Sakamoto; Wenling Wang, both of Sagamihara; Moyuru Yasuhara, Tokyo, all of (JP)

(73) **Assignee:** Tokyo Electron Limited, Tokyo (JP)

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*Primary Examiner*—Sang Paik

(74) *Attorney, Agent, or Firm*—Oblon, Spivak, McClelland, Maier & Neustadt, P.C.

(57) **ABSTRACT**

A second vertical heat treating apparatus is temperature-calibrated based on a heat treatment result obtained by a first vertical heat treating apparatus for reference. First, temperature measurement wafers is heated in the first apparatus to obtain set values of temperature controllers for a target value of temperature. Then, wafers are subjected to an oxidizing process in the first apparatus by using these set values to form an oxide film. The thickness of the oxide film is measured and recorded as a reference film thickness. Then, wafers are subjected to an oxidizing process in a second apparatus at temperatures near the target value to form an oxide film. The thickness of the oxide film is measured, and difference in thickness between the oxide film formed in the second apparatus and the reference film thickness is obtained. The oxidizing process in the second apparatus is repeated to obtain set values of temperature controllers for the second apparatus at the time when the difference in film thickness becomes zero. The second apparatus is temperature-calibrated on the basis of the set value thus obtained.

**20 Claims, 6 Drawing Sheets**

